

CLAIMS

What is claimed is:

1. A wireless local area network (WLAN) for providing wireless telecommunications services to a multi-mode mobile station, said multi-mode mobile station being able to wirelessly communicate with a wireless wide area network (WWAN) when operating in a first wireless coverage area, said WWAN including a first data register that contains a first data record for said multi-mode mobile station, said WLAN comprising:

5 at least one wireless access point providing a second wireless coverage area, said multi-mode mobile station being able to wirelessly communicate with said at least one wireless access point when said multi-mode mobile station operates in said second wireless coverage area;

10 a private branch exchange (PBX) communicatively coupled to said at least one wireless access point; and

15 a second data register communicatively coupled to said PBX and to said first data register, said second data register being able to transmit at least one mobility management message to said first data register, whereby said at least one mobility management message facilitates roaming between said first and second wireless coverage areas by said multi-mode mobile station.

2. The WLAN of claim 1, wherein said second data register is integrated with said
20 PBX.

3. The WLAN of claim 1, wherein said PBX is communicatively coupled to a packet-switched network.

4. The WLAN of claim 1, wherein said PBX is communicatively coupled to a circuit-switched telephone network.

5 5. The WLAN of claim 1, wherein said second data register stores a second data record for said multi-mode mobile station when said multi-mode mobile station operates in said second wireless coverage area.

10 6. The WLAN of claim 1, wherein said at least one mobility management message includes a registration message that said second data register sends to said first data register when said multi-mode mobile station operates in said wireless coverage area, said registration message identifying said multi-mode mobile station.

15 7. The WLAN of claim 1, wherein said at least one mobility management message includes a routing message, said routing message including routing information to route a call to said multi-mode mobile station.

20 8. The WLAN of claim 7, wherein said routing information includes a directory number associated with said PBX.

9. The WLAN of claim 7, wherein said routing information includes a directory number associated with a media gateway communicatively coupled to said WLAN via a packet-switched network.

10. The WLAN of claim 7, wherein said routing information includes an Internet Protocol (IP) address of said PBX.

11. The WLAN of claim 7, wherein said routing information includes an Internet
5 Protocol (IP) address of said multi-mode mobile station.

12. A method of mobility management of a multi-mode mobile station, said multi-mode mobile station being able to wirelessly communicate with a wireless wide area network (WWAN) and with a wireless local area network (WLAN), said method comprising:

10 said multi-mode mobile station associating with a wireless access point of said WLAN;
a private branch exchange (PBX), communicatively coupled to said wireless access point, storing information regarding said multi-mode mobile station in a WLAN data register; and
said WLAN data register sending a registration message to a WWAN data register in said
WWAN, said registration message identifying said multi-mode mobile station.

15
13. The method of claim 12, further comprising:
said PBX receiving a service registration message from said multi-mode mobile station, said service registration message identifying said multi-mode mobile station; and
said PBX sending a registration notification message to said WLAN data register, said
20 registration notification message identifying said multi-mode mobile station.

14. The method of claim 13, further comprising:

said WLAN data register storing a data record for said multi-mode mobile station.

15. The method of claim 12, further comprising:

10 said WLAN data register receiving a routing request from said WWAN; and

15 sending a routing message to said WWAN data register, said routing message including routing information to route a call to said multi-mode mobile station.

5

16. The method of claim 15, wherein said routing information includes a directory number associated with said PBX.

17. The method of claim 15, wherein said routing information includes a directory

10 number associated with a media gateway communicatively coupled to said WLAN via a packet-switched network.

15 18. The method of claim 15, wherein said routing information includes an Internet Protocol (IP) address of said PBX.

15

19. The method of claim 15, wherein said routing information includes an Internet Protocol (IP) address of said multi-mode mobile station.

20